



CHLOROFORM

What is chloroform?

Chloroform is a by-product formed when chlorine is used to disinfect water. Chloroform is also used in industrial processes. It is a colorless liquid with a pleasant, non-irritating smell and a slightly sweet taste. It is nonflammable.

Where can chloroform be found and how is it used?

Low levels of chloroform are found in the air and in coastal waters, inland rivers, lakes, and groundwater. Levels can be higher in industrial areas as well as in the air above swimming pools containing chlorine.

Chloroform is used as a solvent, a substance that helps other substances dissolve. It is used as a solvent for lacquers, floor polishes, adhesives, alkaloids, fats, oils, and rubber. It is used in the manufacture of plastics, resins, propellants, dyes, and refrigerants.

Chloroform was used to make a refrigerant called HCFC-22. As of January 1, 2020, the United States Environmental Protection Agency ended the production and import of HCFC-22. Until the mid-1900s, chloroform was used as an anesthetic to reduce pain during medical procedures. Today, it is not used in this way due to its harmful effects.

How can people be exposed to chloroform?

Most people are exposed to chloroform in food, drinking water and indoor air.

You could be exposed to chloroform through:

- **Breathing** air with chloroform for a short time causes headache, fatigue, and dizziness. Breathing air with chloroform for a long period damages the brain, liver, and kidneys. It may cause cancer.
- **Drinking** water with chloroform over a long period damages the liver and kidneys. It may cause cancer.
- **Eating** food with chloroform in it over a long period damages the liver and kidneys. It may cause cancer.
- **Touching** liquid chloroform causes sores and skin irritation. It may cause cancer.

Poison Control Center 24/7 Emergency Contact Number: 1-800-222-1222
DPH 24/7 Contact Number: 1-888-295-5156



Frequently Asked Questions

How does chloroform work and how can it affect my health?

Chloroform is toxic to the central nervous system and can cause a person to become unconsciousness. Chloroform exposure can be fatal at high doses and damages the liver, causing hepatitis, and can also harm the kidneys, brain, heart, and bone marrow. Respiratory injuries from chloroform exposure include respiratory depression, pneumonitis, and pulmonary edema. It has not been found to harm a fetus.

How is chloroform poisoning treated?

Persons exposed to chloroform should be removed from the source of exposure. Contact medical personnel immediately for advice on further treatment.

What should I do if exposed to chloroform?

Anyone who may have been exposed to high levels of chloroform should be removed from the source of exposure immediately. Clothing that contacted chloroform should be removed and discarded. Skin and eyes contaminated with chloroform should be flushed with clean water for at least 15 minutes. Seek medical attention immediately.

What factors limit use or exposure to chloroform?

Most of the population is exposed to very low levels of chloroform every day in the air, food, and water we take in every day. Exposure to higher levels of chloroform is very unlikely for anyone outside industries using or manufacturing chloroform.

Is there a medical test to show whether I've been exposed to chloroform?

Tests can determine the level of chloroform in blood, tissue, and the air you exhale. These tests must be done a short time after exposure because chloroform leaves the body quickly.

Technical information for chloroform

CAS Number: 67-66-3

Chemical Formula: CHCl_3

Carcinogenicity (EPA): B2 – Probable human carcinogen.

MCL (Drinking Water): 0.07 mg/L (Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health.)

OSHA Standards: 50 ppm (9.78 mg/m³) (ceiling limit not to be exceeded at any time)

NIOSH Standards: 2 ppm (9.78 mg/m³). (limited to 60-minute exposure)

ACGIH: 10 ppm, 8 hr Time Weighted Avg (TWA)

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Resources

Agency for Toxic Substances and Disease Registry (ATSDR). 2015. *Toxicological profile for Chloroform.*

<https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=53&tid=16>

Agency for Toxic Substances and Disease Registry (ATSDR). 2015. *ToxFAQS for Chloroform.*

<https://wwwn.cdc.gov/TSP/ToxFAQs/ToxFAQsDetails.aspx?faqid=52&toxid=16>

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